

## ANALYSIS OF SELECTED VARIABLES AFFECTING SMALL-SCALE PIG PRODUCTION IN CROSS RIVER STATE, NIGERIA

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### ABSTRACT

This study was carried out to determine variables affecting pig production in Cross River State. A stratified random sampling method was used to collect data from three hundred (300) respondents in the study area. Data collected was analyzed by using descriptive statistics. The findings of the study indicates that majority of pig farmers in the study area were men. Analysis of result also revealed that most pig farmers in the study area own farm sizes less than one hectare and 57.33% of the respondents earned less than ₦15, 000.00 as monthly income while 3.33% earned more than ₦21,000.00. Analysis of results revealed that sickness and pains (80%), lack of supplementary feeds (90%), lack of vaccines/vaccination (91%), lack of good farm management practices (86.69%), lack of extension visitation /contact (86.67%), lack of trained veterinary doctors (100%) in rural areas where pigs farms are located /established are among some of the variables that very serious affected pig production in Cross River State. Extension agents should visit farmers and advice them to form cooperative groups to enable them obtain loans from banks to increase their capital base for higher output. . The result suggests that most people practicing pig farming can increase their capital base by forming cooperative groups to enable them obtain loans from banks for expansion of their farms. Government should train more veterinary doctors and post them to rural areas where pig farms were established and government should also provide mobile veterinary services in the study area.

KEYWORDS: Pig, Variables, Production, Policy, Cross River State

### INTRODUCTION

Population growth and poverty, which pervade Sub-Saharan Africa, continues to emphasize the need to increase livestock production in sub-region with emphasis on pig production. Successive government had embarked on policies and programmes aimed at boosting sustainable livestock production in Nigeria. These policies mostly centered on production of pigs, cattle, poultry and small-ruminants (Effiong and Onyenweaku, 2006).

Most Nigerian populace are involved in livestock production either on part-time or full-time but unfortunately, the sector remains undeveloped as a result of low technology and lack of implementation of agricultural policies by government and its agents (Effiong and Onyenweaku, 2006). Fabiyi (1996), revealed that the output of livestock production in Nigeria have a very low growth rate. He revealed that the growth rate for pork meat production for 1980-1992 was only 13.43 (Table 3). According to the 1990 national estimates of livestock in Nigeria (RIM, 1992), pig population stood at about 53.41 million. Pork constitutes 0.46kg on per capita basis meat supply in Nigeria (Federal Ministry of Agriculture, FMA, 1974). Holness (1991) indicated that pig farming has a lot of financial rewards. Capital investments in pig production can bring huge returns in a relatively short period because of high fecundity and prolificacy of pigs. According to Akomas, *et al* (2006) revealed that in many sub-urban areas pigs are raised either in a backyard with 2 to 3 heads per family or on a medium production scale of an average of 20 to 50 heads per family. They further stated that the reproductive performance of sows depends on the ability of the pig farmer to manage his farm well. Farmers in Nigeria need to improve the efficiency in livestock production so that output could be raised to meet the growing demand (Effiong and Onyenweaku, 2006). There is need to increase meat supply to meet market demand by consumers.

Effort by Livestock Research Institutes, have increased yield. However, this increase potential has not been translated into sustained increases in field output and income for small-scale farmers. Bahrman (1976) reported that small holders respond more to current prices in the short run than large-scale operators, particularly those own by

Table1: Socio-Economic Characteristics of pig farmers in Cross River State

S/N	Characteristics	Frequency	Percentage
1	Sex		
	Male	294.00	98
	Female	6.00	2
	Total	300	100
2	Marital status		
	Married	189.00	63
	Single	111.00	37
	Total	3000	100
3	Age (years)		
	<30	32	10.67
	31-60	166	55.33
	>60	102	34.00
	Total	300	100
4	Highest Education attainment		
	Primary education	122	40.67
	Secondary education	160	53.33
	Tertiary education	9	3.00
	No education	9	3.00
	Total	300	100
5	Number of children		
	1-5	158	52.67
	6-10	125	41.67
	11-15	3	1.00
	16-20	1	0.33
	No children	13	4.33
	Total	300	100
6	Employment status		
	Government employed	117	39
	Self employed	183	61
	Total	300	100
7	Experience in farming		
	<5	21	7
	6-10	168	56
	>10	111	37
	Total	300	100
8	Farm size (hectares)		
	<1.0	178	59.33
	1.0-1.5	118	39.33
	>1.5	4	1.33
	Total	300	100
9	Off-farm income naira per month		
	<15,000	172	57.33
	16,000-20,000	118	39.33
	>21,000	10	3.33
	Total	300	100
10	Part-time/full-time farming		
	Part-time farming	90	30
	Full-time farming	210	70
	Total	300	100

Source: Field survey, 2007.

government. He maintained that the situation is due to the fact that small holders predominate in production in most countries.

Chukuigwe and Onyegbule (2006) revealed that farmers have not been able to take advantage of increases in market prices because of some variables or constraints they face. This study is designed to examine critically variables that affect pig production in the study area. Ultimately, it is hope, that the study will help to recommend solutions to constraints or variables militating against increase pig production.

Table2: Distribution of respondents by variables that affects pig production in Cross River State, Nigeria.

S/N	Variables Affecting pig production in Cross River State	Agree	Undecided	Disagree	Rank
1	Sickness and pains	80.00	20.00	-	VIII
2	Lack of medical treatment	98.00	1.00	1.00	II
3	Heat stress	40.00	53.33	6.67	IX
4	Lack of supplementary feeds	90.00	8.00	2.00	V
5	Lack of vaccines/vaccination	91.00	6.67	2.33	IV
6	Poor sanitation /lack good farm management practices	86.69	10.00	3.31	VI
7	Lack of capital	93.33	5.00	1.67	III
8	Lack of pens to keep pigs	20.00	73.33	6.67	X
9	Lack of extension visitation/ contact	86.67	10.00	3.33	VII
10	Lack of veterinary doctors	100	-	-	I

Source: Field Survey, 2007

## METHODOLOGY

**STUDY AREA:** The research study was conducted in Cross River State. The state occupies an area of about 22, 342.176 Square Kilometers (Quarterly News Letter of the Ministry of Local Government Affairs, C.R.S 2006 Pp 4-8). It is located at Latitude 5° 25'N and longitude 25° 00'E . The soils of Cross River State are utisols andalifisol but predominantly utisol (USDA) or (FAO/UNESCO, 1974).

Cross River State has the largest rainforest covering about 7,290 square kilometers described as one of Africa's largest remaining virgin forest harbouring as many as five million species of animals, insects and plants (MOFINEWS, 2004). Cross River State is located within the evergreen rainforest zone. There are two distinct climate seasons in the area, rainy season from March to October and dry season from November to February. The annual rainfall varies from 2,942mm to 3,424mm. The average temperature is around 28°C (CRADP, 1992). Cross River State is characterized by presence of numerous ecological and zoo-geographically important high gradient streams, rapids and waterfalls. About 2.8 million people inhabit the area of which the Efiks, Ejaghams and Bekwarra, are the major ethnic groups. Fishing and subsistence agriculture are the main occupations of the people. Crops and animals are grown in the locality. Population depends largely on natural water sources for all their water-related activities, as piped water supply is limited and grossly inadequate. Health services in the area require a lot of improvement. Level of hygiene in the communities is generally poor (Arene , *et al*, 1999).

Stratified random sampling technique was used to select the respondents. This procedure recognized the delineation of the study area into zones. The Cross River Agricultural Development Project (CRADP) divided this agricultural zone into Northern Zone (Ogoja Zone), Central Zone (Ikom Zone) and Southern Zone (Calabar Zone) of the state. There are 18 Local Government Areas in Cross River State. The agricultural zone consists of 17 blocks, 8 circles and 136 cells with 5,200 contact farmers. At the first stage seventeen (17) local government areas will be selected from eighteen (18) local government areas, ten (10) farming communities will be randomly chosen from each of the three agricultural zones of the state. For better coverage in the study area, one village will be randomly chosen from each of the communities (thirty villages will be taken from the three agricultural zones). Ten respondents were randomly selected from each of the selected farming communities. In all, 300 farmers (respondents) were randomly selected from a list compiled by the extension agents of Cross River Agricultural Development Programme .

Table3: Estimated Output of livestock production in Nigeria 1980-1992( '000tonnes)

Class of Livestock	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	Growth Rate
Poultry	53	59	59	58	62	64	67	56	54	58	57	52	50	-0.86
Goat	140	169	175	172	177	186	192	206	216	190	179	182	185	1.17
Lamb/mutton	50	53	59	57	65	66	68	75	16	62	84	85	86	8.79
Beef	116	158	194	177	199	212	223	232	266	279	279	280	281	2.66
Pork	34	20	25	24	28	31	33	34	100	91	125	130	142	13.43
Milk	101	138	169	154	164	172	180	182	231	243	243	244	247	1.57
Eggs	314	353	352	346	380	390	399	332	260	343	337	311	301	-
Fish	-	-	502	518	343	240	281	392	313	329	290	295	232	-11.17

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Lamb/mutton	50	53	59	57	65	66	68	75	16	62	84	85	86	8.79
Beef	116	158	194	177	199	212	223	232	266	279	279	280	281	2.66
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Source: Central Bank of Nigeria: Annual Reports1980-1992 (In: Fabiyi,1996)p41.

## RESULTS AND DISCUSSION

Table1 revealed that most of the pig farmers in the study area (98%) were male. Sixty three percent of pig farmers were married while 37 percent were still single. Majority of the pig farmers (55.33 percent) were between the age of 31-60 years, 34 percent were more than 60 years of age whereas only 10.67 percent of pig farmers were less than 30 years. The result implies that most of the respondents were within the economically active age. These findings are synonymous with Asa (2003), that people in the age groups of 41-60 are more economically active and independent than those in the age group of 'less than 21 years' and above 60 years. Most of the respondents ( 53.33 percent) had post primary qualifications. Only 3percent had tertiary qualification, 3 percent of them did not have any form of educational training. Table 1 also revealed that 52.67 percent of the respondents had 1 - 5 children, 41.57 percent had 6-10 children , whereas 1 percent had 11-15 children, 0.33 percent of them had 16-20 children whereas 4.33 percent had no children. Majority of the respondents (61 percent) were self- employed whereas 39 percent were government employed. Most of the respondents (56percent) had 6 - 10 years experience in farming whereas 7 percent farmed for less than 5 years .The results imply that majority of the respondents have been in pig farming for a long time. Most of the respondents (59.33percent) had farm sizes less than one hectare, whereas only 1.35 percent of the respondents had farm size more than 1.5 hectares. Majority of the respondents ( 57.33 percent) earned less than N 15,000.00 as their monthly farm income while( 3.33 percent) earned more than N 21,000.00. The result suggests that most people practicing pig farming are mostly in the low- income class. The result confirms similar findings by Etim, *et al* (2006) that farmers who had plot size 1.5 hectares are mostly in the low- income class who farm mainly to augment family income and nutrition supply.

Analysis of Table 2 revealed that sickness and pains (80%), lack of medical treatment (100%), heat stress (40%), lack of supplementary feed (90%), lack of vaccine/ vaccination ( 91.00%), poor sanitation / lack of good farm management practices (86.69%), lack of capital(93.33%), lack of pens to keep pigs ( 20.00%) lack of extension visitation to farmers ( 86.67%) and lack of veterinary doctors in rural areas where pigs are produced ( 100%) are among the variables that very seriously affect pig production in CrossRiver State, Nigeria.

## CONCLUSION

The major focus of the study was to identify variables that affect pig production in Cross River State. The socio-economic characteristics as well as the factors that affect pig production were analyzed. The findings of the study indicate that majority of pig farmers were men. Analysis of results revealed that sickness and pains (80%), lack of medical treatment (100%), heat stress (40%), lack of supplementary feed(90%), lack of vaccine/ vaccination ( 91.00%), poor sanitation / lack of good farm management practices ( 86.69%), lack of capital ( 93.33%) , lack of pens to keep pigs ( 20.00%) lack of extension visitation to farmers ( 86.67%) and lack of veterinary doctors in rural areas where pigs are produced ( 100%) are among the variables that very seriously affect pig production in Cross River State, Nigeria. Results also revealed that most pig farmers own farm sizes less than one hectare. The results also indicated that majority of the respondents (57.33percent earned less than ₦15,000. 00 as monthly farm incomewhile 3.33 percent earned more than ₦21,000.00. The result suggests that most people practicing pig farming can increase their capital base by forming cooperative groups to enable them obtain loan from banks for expansion of their farms.

## RECOMMENDATIONS

Having noted some of the variables that affect pig production in Cross River State, this paper makes the following recommendations:-

- (1) Extension agents should visit farmers and advice farmers to form cooperative groups to enable them obtain loans from banks.
- (2) Farmers should increase their farm size for pig production.
- (3) Government should train more veterinary doctors and post them to rural areas where pig farms are established.
- (4) Government should provide mobile veterinary services in rural areas.

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